CLINTON MUNICIPAL TRANSIT AUTHORITY
SPECIAL STUDY

Prepared July 1979

EAST CENTRAL
INTERGOVERNMENTAL ASSOCIATION

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SPECIAL STUDY

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Regional Transit Development Program.

Prepared By

East Central Intergovernmental Association

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

SUMMARY OF MAJOR RECOMMENDED TRANSIT IMPROVEMENTS

1.) Implement new fare structure. Established one-fare system (25¢ for all riders) to speed the boarding process, increase revenue, and increase ridership.

2.) Change time schedule of all routes. Schedule all buses to arrive downtown ten minutes earlier (at ten minutes before, and twenty minutes after each hour) to allow passengers more time to get to work.

3.) Adopt new transfer policy allowing transfers where any two routes intersect, increasing passenger convenience.

4.) Eliminate Saturday morning transit service prior to 8:00 A.M. saving an estimated $9,000 annually.

5.) Increase marketing and advertising.

6.) Further investigate peak-hour transit commuter service to the Du Pont Company and the Clinton Corn Processing Company.

CHAPTER I - INTRODUCTION

INTRODUCTION

OVERVIEW

Prior to the energy crisis of 1973-1974, nearly all transit systems throughout the United States had experienced steadily decreasing patronage since World War II. Increasing auto availability, changing travel demands associated with urban sprawl, and declining levels of available transit services are generally accepted as three major reasons for losses in ridership.

As the number of riders has grown smaller each year, farebox revenues have also dwindled. Decreases in revenue, coupled with the increasing costs of operation, have led most system operators to compensate by raising fares and decreasing the levels of services. However, this so-called solution has only served to perpetuate the problem by offering the remaining passengers more expensive yet less effective service, thus discouraging their continued patronage.

While the ownership of a transit system may have been a profit earning private enterprise in the past, the financial feasibility of such an operation today is doubtful. Subsidies from Federal, state, and local governments are essential to continue operation of transit systems. The continued analysis and refinement of each system is necessary not only to ensure the most efficient use of these tax dollars, but to improve the system so

that it becomes a viable alternative to the private automobile. This study will examine the existing Clinton Municipal Transit System and identify specific, low-cost improvements to increase both the ridership and the economic efficiency of the system.

STUDY APPROACH

A close working relationship was established and maintained with the Clinton Municipal Transit Authority through the Transit Director, Donna Morgan. Frequent consultation with the Director ensured that recommendations of the transportation planner were both feasible and implementable. The Transit Director also kept the Municipal Transit Authority Board of Trustees aware of the major changes which were being examined for inclusion as final recommendations.

The investigation of peak-hour industrial commuter service was initiated with an informal informational meeting of the transportation planner, a representative of the Clinton Development Corporation, and a representative from each of the following industires: Chemplex Corporation, Clinton Corn Processing Company, International Paper Company, Du Pont Company, and the Ralston-Purina Company. The overall concept of transit commuting service was explained and discussed. The industry representatives expressed interest and agreed to assist in the essential initial step of distributing and collecting questionnaires. The representatives were later invited to the presentation of the final report.

The towns of Fulton and Camanche were surveyed via direct-mail to randomly selected households.

CHAPTER II - PUBLIC TRANSPORTATION IN CLINTON

PUBLIC TRANSPORTATION IN CLINTON

BACKGROUND

The first transportation service in Clinton, Iowa was inaugurated by the Clinton and Lyons Horse Company in 1859 and in 1865 the line was extended to the length of Camanche Avenue in Clinton. In 1889 the street car line was electrified. At the same time, a battle for the franchise developed between The Lyons and Clinton Horse Railway Company and the Electric Company, which was controlled by a group of Clinton citizens. The State Electric Company absorbed the other company and continued to operate the street car system until 1903, when it was sold to the Clinton Street Railway Company.

The Clinton Street Railway Company operated the bus system until it was sold at a bankruptcy sale on October 14, 1960. Interstate Power Company purchased the assests of the Street Railway Company on October 15, 1960 and continued to operate the System through August 31, 1973, when it was sold to the newly established Clinton Municipal Transit Authority.

The Authority was established under a Clinton, Iowa, ordinance creating the Municipal Transit Authority and adopted on August 13, 1973 by the City Council of Clinton, Iowa. All of the physical assests of the system (with the exception of the bus garage, which is leased) were acquired from the Interstate Power Company for the sum of one dollar ($1). The Transit Authority officially took over the operations of the transit system on Saturday, September 1, 1973.

TRANSIT ROUTES AND SCHEDULING

There are currently seven basic bus routes that serve the City of Clinton: Main Avenue North and Camanche Avenue, Main Avenue West and Camanche Avenue, North Branch, South Branch, 9th Avenue South Hill Line, North 4th Street, and the South Clinton route.

The Main Avenue North and Camanche Avenue route is operated on a one-hour headway, but the route is matched with the Main Avenue West and Camanche Avenue (also one-hour headway) so that essentially, half-hour headways result. Except for loops at the north and south ends of each route, the same streets are traveled both to and from the central business district. Service is provided once per hour on the North Branch, North 4th Street, and South Clinton routes. On the 9th Avenue Hill Line service is provided every half-hour. All buses meet at the Central Transfer Point (5th Avenue South and South Second Street) every half-hour. The complete route system configuration can be seen in Figure 1.

Service is provided from approximately 6 a.m. to 6 p.m. six days per week, Monday through Saturday. Charter service is also available.

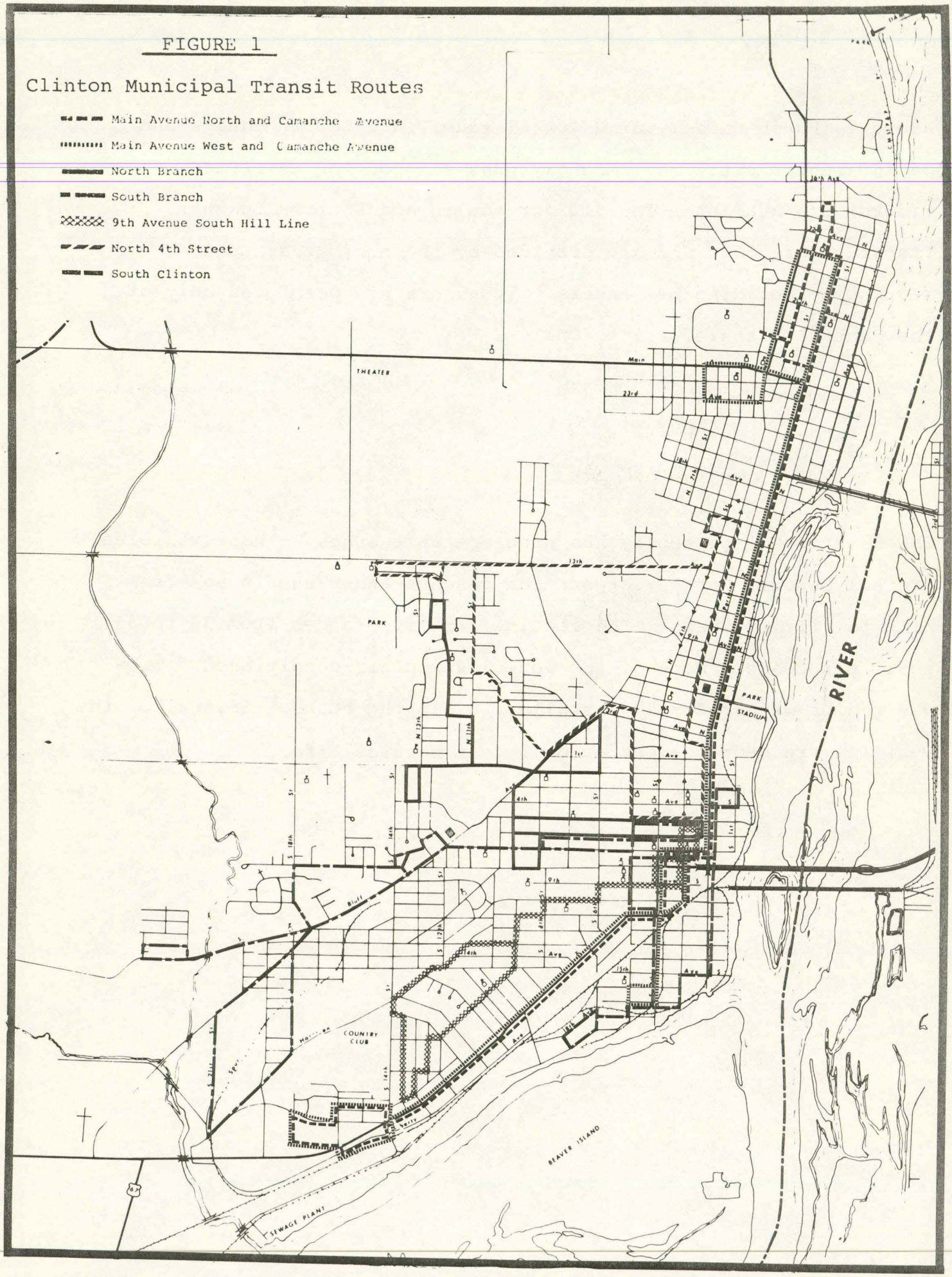
FARE STRUCTURE

The cash fare throughout the system is 30¢ for adults (ages 19-59) 20¢ for students (ages 5-18) and 15¢ for senior citizens (age 60 and

FIGURE 1

Clinton Municipal Transit Routes

- Main Avenue North and Camanche Avenue
- Main Avenue West and Camanche Avenue
- North Branch
- South Branch
- 9th Avenue South Hill Line
- North 4th Street
- South Clinton



above). Punch cards, valid for 21 rides, are $6 for adults and $4 for senior citizens. Monthly passes (good for unlimited riders) are available for $12 for adults and $6 for students. Transfers are free and are provided by the bus driver upon request by boarding passengers. Transfers are permitted only at the Central Transfer Point (CTP).

FLEET

The Clinton MTA presently has nine operable buses. These vehicles are all General Motors Corporation coaches and range in age from nine to fifteen years. The seating capacity ranges from 33 to 35 seats per coach. None of the vehicles are air-conditioned. Two-way radios were recently installed in all the buses. Several of the vehicles are near the end of a 15-year service life.

CHAPTER III - THE CLINTON STUDY AREA

THE CLINTON STUDY AREA

The Clinton study area includes the entire City of Clinton, and parts of the nearly communities of Camanche, Iowa, and Fulton, Illinois.

The current population of the City of Clinton is estimated at approximately 35,000. Camanche has a population of approximately 4,000, and Fulton approximately 3,700. Population growth has been minimal in recent years.

Clinton has a stable economy based on a combination of light industry and a strong commercial sector. There is considerable employment represented by the major categories of food processing, chemicals, machinery and steel fabrication, garments and coupon redemption. These are complemented by the universal complement of retail, service and local government industries.

There is a good balance between the manufacturing industries relying on male workers and the garment, retailing and office type employers relying heavily on female workers.

The geographic distribution of employment concentrations is primarily along and seldom more than a mile away from the Mississippi River. This distribution is conducive to success in supplying mass transit in a convenient pattern for a large percentage of the employers.

The current population is concentrated near the river, with the thickness of the residential development strip barely exceeding a mile and a half and most often less than a mile.

LAND USE CHARACTERISTICS

Present industrial uses primarily border the Mississippi River with most of it concentrated in the southern sectors along the Beaver Slough, the Chicago-Northwestern Railroad, and US 30. Future industrial growth patterns are directed westerly along US 30, projecting from the existing industrial core area. The eventual result will be an industrial concentration between Clinton and Camanche.

Four areas are defined as commercial--Downtown Clinton; Lyons Business District; North Second between Lyons and Downtown Clinton; and Camanche Ave/US 30.

Residential areas blanket most of the City and extend from the commercial and industrial borders north and west along the flat flood plain into the bluffs.

CHAPTER IV - EVALUATION OF EXISTING TRANSIT SYSTEM

EVALUATION OF EXISTING TRANSIT SYSTEM

The Clinton MTA currently provides an adequate level of service to the Clinton community, especially in consideration of their reliance on non-federal funding for system operation. A major percentage of the operating expenses are paid for by the city itself, with the deficit being funded by the Iowa Department of Transportation. Due to this large outlay for operating funds, the City is severely limited in the amount of funds it can provide for capital improvements, thus increasing the importance of getting the maximum efficiency out of the existing system. There are various low-cost, operational improvements that can be made to increase the economic efficiency of the system, as well as making it more attractive to potential users. This section presents an evaluation of the existing transit service conditions in Clinton. The transit system is evaluated in terms of the transit service area, schedule design and fare policy (including transfer policy).

TRANSIT SERVICE AREA

Transit route design and service area coverage are generally evaluated by walking distance standards. The generally accepted standard used to define the transit service area is that area within three blocks (approximately one-quarter mile) of a bus route. This quarter-mile rule of thumb was altered slightly for the Beaver Channel Parkway area. Although two Camanche Avenue routes are actually within a quarter-mile of the Parkway, they are essentially inaccessible due to both the topography of the area and the presence of several rail lines which inhibit free movement. In this area, the transit service area quarter-mile

boundary was measured from the viaduct near South 14th Street and Camanche Avenue.

The majority of the City of Clinton is within the transit service area (see Figure 2). Unserved areas include: the area north of 37th Avenue North, the Meadowview Heights area (also near the north end), the northern part of Springdale Heights, a lightly developed area just north of Mt. St. Clare Academy, an area on both sides of Harrison Drive (primarily Clinton Country Club property), and much of the Beaver Channel Parkway.

However, most of these areas can not be provided service in the near future for two major reasons. First, most MTA routes are already extended as much as possible while still maintaining half-hour headways (necessary to make downtown transfer connections). Second, the ridership potential in these areas is presently unknown, and MTA's budget will not allow service extensions to questionable market areas.

Clinton Community College, although within the transit service area, does not have a bus route close enough to compete with the school's parking facilities. It should also be noted that the nearby communities of Camanche, Iowa, and Fulton, Illinois, are presently unserved (see Chapter VII for survey results of these areas).

Most of the major employers in the Clinton urban area are served by transit routes. Those employers of 25 or more persons are shown in Figure 2 . There are, however, several major employers that are

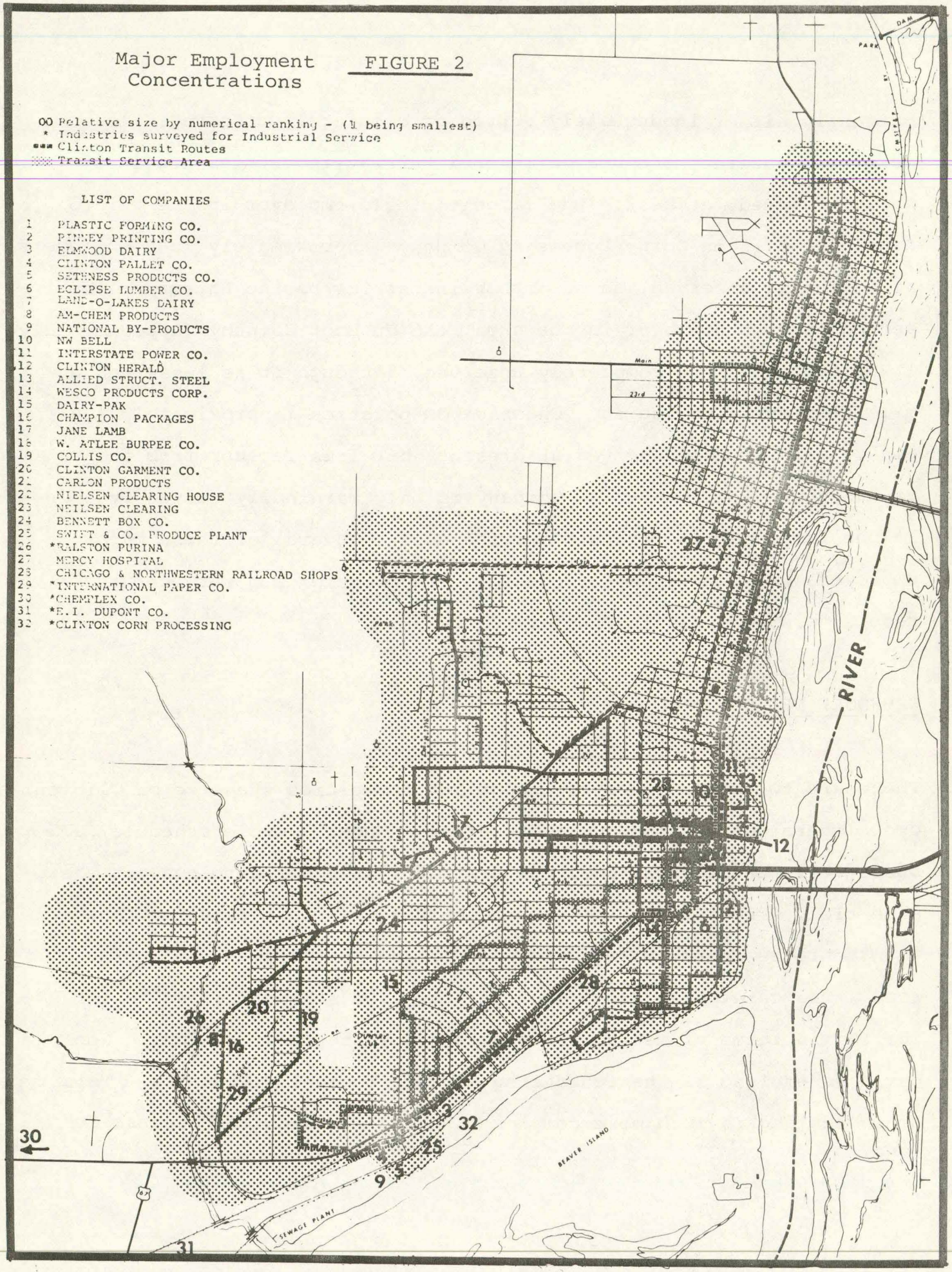
Major Employment Concentrations

FIGURE 2

00 Relative size by numerical ranking - (1 being smallest)
* Industries surveyed for Industrial Service
Clinton Transit Routes
Transit Service Area

LIST OF COMPANIES

1 PLASTIC FORMING CO.
2 PINNEY PRINTING CO.
3 ELMWOOD DAIRY
4 CLINTON PALLET CO.
5 SETHNESS PRODUCTS CO.
6 ECLIPSE LUMBER CO.
7 LAND-O-LAKES DAIRY
8 AM-CHEM PRODUCTS
9 NATIONAL BY-PRODUCTS
10 NW BELL
11 INTERSTATE POWER CO.
12 CLINTON HERALD
13 ALLIED STRUCT. STEEL
14 WESCO PRODUCTS CORP.
15 DAIRY-PAK
16 CHAMPION PACKAGES
17 JANE LAMB
18 W. ATLEE BURPEE CO.
19 COLLIS CO.
20 CLINTON GARMENT CO.
21 CARLON PRODUCTS
22 NIELSEN CLEARING HOUSE
23 NEILSEN CLEARING
24 BENNETT BOX CO.
25 SWIFT & CO. PRODUCE PLANT
26 *RALSTON PURINA
27 MERCY HOSPITAL
28 CHICAGO & NORTHWESTERN RAILROAD SHOPS
29 *INTERNATIONAL PAPER CO.
30 *CHEMPLEX CO.
31 *E.I. DUPONT CO.
32 *CLINTON CORN PROCESSING



currently either inadequately served or completely unserved. As mentioned earlier, the Beaver Channel Parkway industries are inadquately served, at best. The largest single employer in the Clinton area, the Clinton Corn Processing Company (approximately 1300 employers), is virtually unserved, as are other industries on the Parkway. The second largest employer in the area, the Du Pont Company (approximately 1,230 employees) is completely unserved, although it is less than a mile from existing routes. Chemplex Corporation (approximately 600 employees) is also unserved at present, but lies farther from the urban area. Ralston-Purina Company is only marginally served by being on the fringe of the transit service area. Several of these major employers were surveyed for possible MTA commuter bus service; the results are analyzed in Chapter VI .

SCHEDULE DESIGN

There are two basic types of scheduling for cities the size of Clinton: cycle operation and non-cycle operation. Under a cycle schedule, all buses leave the central business district, or other terminus, at the same time, with one bus assigned to each route; this requires that each route be approximately the same length in terms of round trip time. The chief disadvantage of this type of scheduling is its inflexibility in terms of making route extensions and modifications. Non-cycle scheduling is the scheduling of each route individually. This type of scheduling is much more complex than cycle scheduling because it

demands coordination between routes for purposes of transferring.

A major advantage of cyclic scheduling over non-cyclic is the fact that the passengers who must transfer to complete their trips do not have to wait for the second bus. All the buses arrive at the major transfer zone, usually in the CBD, at the same time, layover for a few minutes to allow transfers and then continue on their routes. Cyclic scheduling is currently used by the MTA, with all buses scheduled to arrive downtown at the central transfer point on the half-hour and on the hour. Although the matched routes of the MTA (North Branch South-Branch, North 4th Street-South Clinton, Main Avenue North and Camanche Avenue and Main Avenue West and Camanche Avenue) help reduce the need for transfers due to through-route nature, transfers can not be completely avoided in any fixed route system. To facilitate transfers, minimize the inconvenience to the transferring passengers, and derive the most from the cyclic schedule, the transfer zone should be small and the vehicles situated close to one another. The existing transfer zone, in the Clinton CBD, is small enough to allow easy movement from bus to bus.

A problem does exist, however, with the scheduled downtown arrival time (on the hour and on the half-hour). Under good weather conditions, drivers have little difficulty in driving their somewhat long loops within the half-hour alotted, and usually arrive downtown with sufficient time for passengers to walk to their places of employment, or

to transfer to another route. Under adverse weather conditions, when roads are slippery and/or partially blocked with snow, total route travel time is slower. This problem is compounded by the significantly increased ridership associated with inclement weather. Additional passengers, while quite beneficial and desirous from the farebox revenue point-of-view, further increases total route travel time. Oftentimes the result is a late downtown arrival time, well-past the scheduled hour or half-hour, and causing many riders to miss transfers or be late for work. After a few times of being late, or missing transfers, many riders switch back to the use of their private automobiles,and some will probably never try the bus alternative again.

Another problem related to route travel time is virtually the opposite of the first, ie. the route being traveled too fast. This problem occurs more frequently in good weather, when roads are clear and ridership is light. In the on-board survey that was conducted in October of 1977, 35.5% of the respondants indicated that the bus had arrived <u>early</u>. Buses should <u>never</u> be running ahead of schedule. Buses running ahead of schedule miss potential passengers, and might result in losing regular riders. One condition which contributes to the problem of staying on schedule is the lack of sufficient time points along each route. After leaving downtown, drivers have only one time point (the extreme point, halfway along each route) for reference to help keep them on schedule.

FARE POLICY: PRICING

The existing fares of the Clinton MTA are among the lowest of all transit systems in the state of Iowa. While this may be quite satisfactory from a user's viewpoint, the lower farebox revenues require increased amounts of subsidy from federal, state, and local levels.

The increased demand for transit, caused both by the increasing cost of gasoline and the inavailability of gasoline, is already being experienced on both coasts. As gas prices soar and supplies get scarce, the demand for transit will grow dramatically; and the competition for limited federal transportation funds will also increase dramatically. Similarly, as prices increase, and as the potential shortage gets closer to a reality in Iowa, the competition for state transit assistance will also increase.

The City of Clinton currently provides $247,019, or over 70% of the operating expenses of MTA. Fares account for approximately 21% of operating expenses, and the remaining expenses are covered by advertising revenues and the Iowa Department of Transportation. In other words, actual user fees provide only 21% of the necessary revenues to operate the system, while much of the remainder is payed for through tax revenues.

In order to increase farebox revenues, and decrease the level of subsidy needed to operate the system, the MTA should revise its existing fare structure.

FARE POLICY: COLLECTION

The transit industry has been essentially a "cash and carry" business which has had to give high priority to very simple methods of fare collection. During the late 1960's there was widespread adoption of the "ready-fare" system in which boarding passengers were required to have the exact change required to pay the fare. This system accomplishes two things; it speeds up the boarding process by eliminating the need for the driver to make change and it greatly reduces the temptation to rob the driver of the money which he would have to carry in his change box.

One previously mentioned problem of the MTA has been difficulty in keeping the buses running on time, specifically in the winter months. This problem can be at least partially attributed to the excessive amount of time the driver must spend making change. One possible solution might be the implementation of a ready-fare (or exact fare) system.

Much care should be exercised, however, in changing to an exact fare policy. A premature change without sufficient notice for

current riders could result in a significant ridership decrease. A minimum of six months notice should be provided to current and potential MTA riders. The date that exact fares would become standard policy should be prominently displayed on all MTA buses, and be clearly stated in all MTA advertisement. While it can be beneficial, the ready-fare system does put a greater burden of responsibility on the passengers and could tend to discourage ridership.

TRANSFER POLICY

The existing Central Transfer Point (CTP), at 5th Avenue South and South 2nd Street, facilitates the transfer of passengers between any two routes, since all buses meet at the CTP at regular intervals during the day. Transfers are permitted only at the CTP. This transfer policy may cause unnecessary passenger inconvenience by necessitating riding all the way downtown to the CTP when a transfer could have been more easily made also where, but would have cost the passengers an additional fare. Such a situation could be easily resolved by implementing a more liberal transfer policy.

CHAPTER V - RECOMMENDED TRANSIT IMPROVEMENTS

ROUTE CHANGES

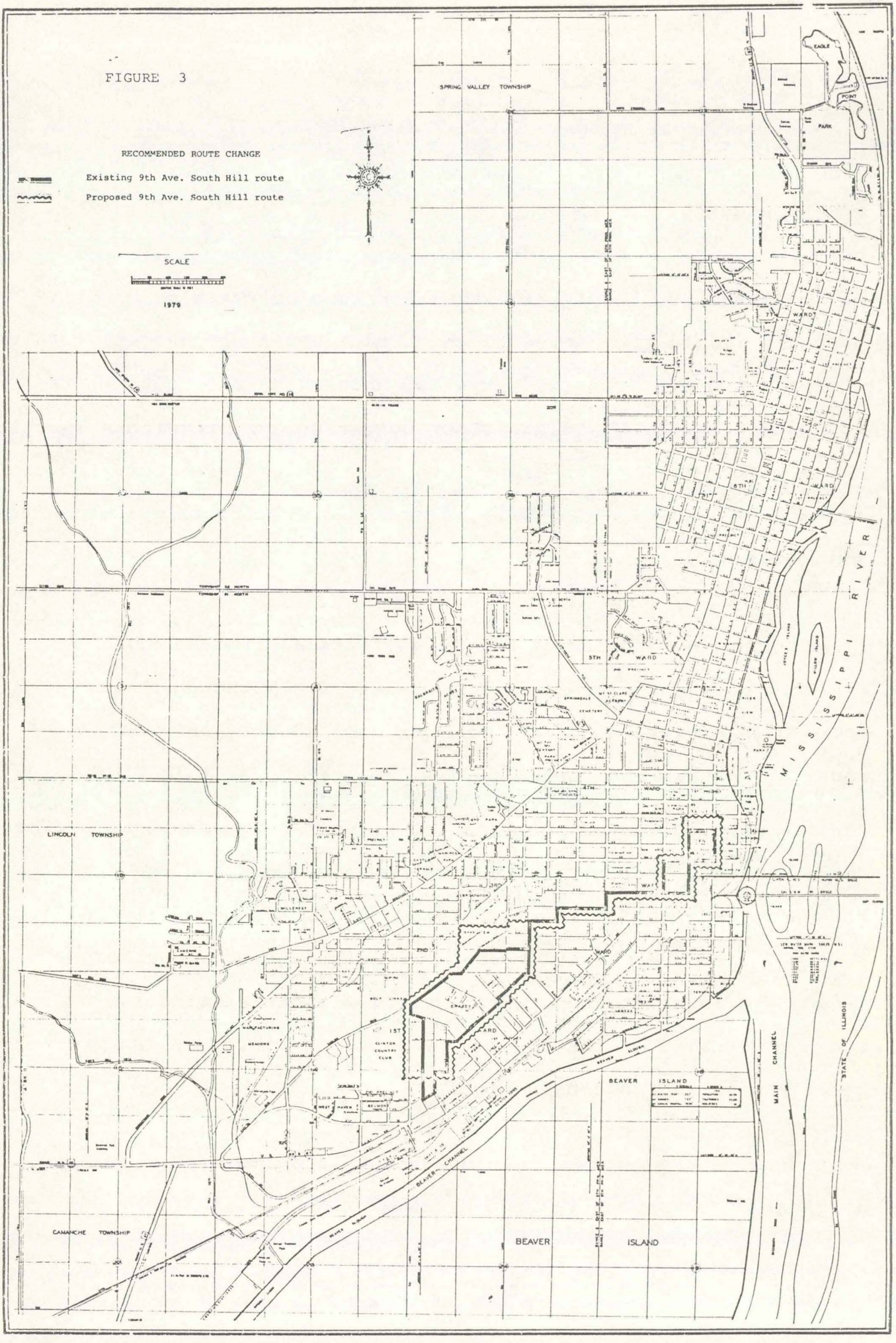
As mentioned previously, the cyclic nature of MTA's scheduling severely limits the degree to which routes can be changed. MTA's routes can not be readily extended, unless the same routes are cut back elsewhere. Unless other operational improvements (such as implementation of an exact fare policy) decrease route travel time, most route changes will be essentially rerouting, not route extensions.

The transportation planner met several times with the MTA Director to discuss possible route changes. Although several route changes were discussed, it was decided that only one route change be recommended for implementation at this time.

The recommended change pertains to the 9th Avenue South Hill line. There were two reasons for this recommended change. The first reason was to provide better service to Clinton Community College. The second was to improve the route's on-time performance by eliminating unnecessary turns without eliminating or reducing service in the area. The existing route and the proposed changes are shown in Figure 3.

Most other route changes were discussed in terms of how to marginally decrease total route travel time, in an effort to

FIGURE 3


RECOMMENDED ROUTE CHANGE
Existing 9th Ave. South Hill route
Proposed 9th Ave. South Hill route
SCALE
1979
SPRING VALLEY TOWNSHIP
EAGLE POINT PARK
7TH WARD
6TH WARD
5TH WARD
4TH WARD
3RD WARD
2ND WARD
1ST WARD
MISSISSIPPI RIVER
LINCOLN TOWNSHIP
CAMANCHE TOWNSHIP
BEAVER ISLAND
BEAVER CHANNEL
MAIN CHANNEL
STATE OF ILLINOIS
CLINTON COUNTRY CLUB
SPRINGDALE CEMETERY
MT. ST. CLARE ACADEMY

increase on-time arrivals at the central transfer point. However, it is anticipated that several other recommendations of this study, if implemented, will eliminate that problem. Therefore, no other route changes are recommended at this time.

SCHEDULE DESIGN

Two problems related to the on-time performance of buses have been identified: late downtown arrival time in winter months, inconveniencing passengers, and second, buses running ahead of schedule (usually in good weather), thereby missing potential passengers. Both of these problems can be solved relatively easily, and at virtually no cost.

The problem of the buses arriving downtown late is not so much a matter of lateness, but of timing. Most people's work and school schedules start on the hour or half-hour. The buses are currently scheduled for downtown at approximately the same time. Obviously, if the bus is a few minutes late, riders will be equally late for work.

The easiest solution to this problem is to change the scheduled downtown arrival time for all MTA buses. By moving MTA schedules back by ten minutes, sufficient time would be available for riders to walk to work after arriving downtown. Even in severe weather, the time change to ten minutes before, and twenty minutes after, each hour would allow for increased route travel times and get people downtown in time for work.

The recent acquisition and installation of radios on MTA buses will also help prevent riders from missing their transfer connections. Now when a bus is running late, the driver can radio ahead and have the connecting bus wait for the transfer passengers.

The second problem of buses running ahead of schedule can be dealt with quite easily, although it ultimately relies on the driver himself. Additional time points should be established on each route, thus enabling the driver to maintain a regular, dependable schedule. These time points will not only help the driver stay on schedule, but will also help customers estimate when the bus will pass by a certain point. These time points should be at well-known locations or major intersections that people can easily identify. Once these time points are established, they should be closely adhered to, and the importance of schedule adherance should be stressed to all drivers. Regular, dependable transit service is essential to increasing total system ridership.

FARE POLICY

In order to increase the total revenue of the system, the MTA should revise its existing fare structure. By increasing actual user fees. MTA will not have to rely as heavily on subsidies to maintain its current level of operations.

It is recommended that the MTA revise it's existing fare structure by going to a flat cash fare of 25¢ for all riders, regard-

less of age. Only one type of punch card (good for 21 rides) would be available, and it would cost $5. A monthly pass (good for unlimited rides) would cost $10. These, too, would be available for the same price for all ages. The basis for the proposed $5 cost of a punch card is the same as that used for the existing $6 and $4 punch cards. The user gets one more ride than if he spent the same amount in cash fares. Similarly, the same rationale was used to determine the appropriate cost for a monthly pass. The $12 adult pass and the $6 student pass of the existing fare structure must be used over forty times a month for a rider to save any money. The same is true with the proposed $10 monthly pass. The proposed fare structure can be compared with the existing fare structure in Table 1.

The implementation of the proposed fare structure will result in several important benefits for the MTA. Some benefits, such as increased revenues, will be immediately noticeable and measurable. Other benefits, such as faster boarding times, and less bookkeeping, will be less obvious.

Obviously, the most important consideration, though, is how the new fare structure will affect total revenue, and it is this crucial financial aspect that will be examined in depth.

TABLE 1

EXISTING MTA FARE STRUCTURE		PROPOSED MTA FARE STRUCTURE	
Cash fares			Cash fares
Adult (age 19-59)	30¢	25¢	All ages
Senior citizen (age 60 and above)	20¢		
Student (age 5-18)	15¢		
Children (under 5)	free	free	Children (under 5)
Punch Cards (good for 21 rides)			Punch Cards (good for 21 rides)
Adult	$6	$5	
Senior Citizen	$4		
Monthly Pass (unlimited rides)			Monthly Pass (unlimited rides)
Adult	$12	$10	All ages
Student	$6		

Effect of Fare Structure Revision on Total Revenue

As part of last year's Regional Transit Development Program Update, an on-board survey was conducted to determine various characteristics and attitudes of MTA riders. One of the questions pertained to the age of MTA riders. These results can be seen below.

AGE OF MTA PASSENGERS

	0-18	19-24	25-39	40-59	60-64	65+	Total
Number of Repsonses	408	93	96	143	56	114	910
Percentage Responding	44.9	10.2	10.5	15.7	6.2	12.5	100

In order to analyze the potential effects of the proposed fare structure revision, these percentage breakdowns for various age groups were applied to the total annual ridership figure of 393,868 (from April 1, 1978 to March 31, 1979). This percentage application results in the following estimated number of riders within each age group:

0-18	19-24	25-39	40-59	60-64	65+
176,847	40,174	41,356	61,837	24,420	49,234

For the purposes of this analysis, these figures will be aggregated into groups corresponding to the MTA's current age breakdown for different fare levels. As can be seen in Table 1 , these age groups are: 1) 5 through 18, 2) 19 through 59, and 3) 60 and above. These groups will hereafter be referred to as Group 1, Group 2, and Group 3 and consist of 176,847 persons, 143,367 persons, and 73,634 persons, respectively.

Since there is no means to determine the exact breakdown of total rides into cash fares, ride-ricket trips, and monthly-pass trips, the comparison of past and present revenues will be made assuming all riders paid cash fares. This will obviously not be accurate to specific dollar figures, but will be useful for comparison purposes.

By using the total estimated number of riders in each of the three age groups, and multiplying by the corresponding fare, total annual revenue can be estimated for each age group (see Table 2).

TABLE 2
ESTIMATED REVENUES WITH EXISTING FARE STRUCTURE

	Group 1	Group 2	Group 3	Total
Estimated # of annual riders	176,847	143,367	73,654	393,868
fare paid	15¢	30¢	20¢	21¢ average fare
Revenue	$26,527	$43,010	$14,731	$84,268

As stated earlier, since these figures were arrived at assuming all riders paid cash fares, the total revenue figure of $84,268 is somewhat inflated. However, revenues from the proposed fare structure will be estimated with the same "all cash fares" assumption.

By using the same ridership figures for Groups 1, 2, and 3, and multiplying by the proposed 25¢ cash fare, the effective change on total revenue can be estimated (see Table 3).

TABLE 3

ESTIMATED REVENUES WITH PROPOSED FARE STRUCTURE

	Group 1	Group 2	Group 3	Total
Estimated # of annual riders	176,847	143,367	73,654	393,868
fare paid	25¢	25¢	25¢	25¢ average
Revenue	$44,212	$35,842	$18,413	$98,467
Change in revenue from existing fare structure	+$17,865	-$7,168	+$3,682	+$14,199

As can be seen by comparing Tables 2 and 3 , total revenue is estimated to increase by $14,199, from $84,268 to $98,467. But as has been pointed out, these figures are estimates, and could be affected by several factors, both positive and negative. For example, it can be anticipated that, if fares are increased, as proposed for Groups 1 and 3, a larger percentage of these groups will attempt to offset the increase by purchasing the money-saving punch-cards and monthly passes, thus decreasing the estimated revenue for those groups.

The on-board survey that was conducted last year showed that 63.6% of MTA passengers are either under 18 years of age or over 60,

72.4% did not have a vehicle available to make their trip, and 70.9% did not possess a valid drivers license. These statistics show that the majority of MTA passengers are "transit captive" and are dependent on MTA service. These riders fall primarily into Groups 1 and 3.

Those MTA patrons that are choice riders use transit because they want to, and fall largely within Group 2. Riders within this group will benefit from a fare reduction if the "one-fare" proposal is implemented. This fare reduction will initially result in decreased revenues from this age group, but the reduction could actually increase the total number of rides. The lowered fare, in conjunction with continually increasing gasoline prices, will make MTA an increasingly attractive alternative to the private automobile.

Other Benefits

As alluded to earlier, many of the benefits of the revised fare structure are less tangible than a dollars-and-cents revenue increase. The 25¢ fare will speed up the boarding process by significantly reducing the time a driver spends making change. Even when changemaking is necessitated by the use of dollar bills, drivers will only have to deal with on type of coin, instead of the current time-consuming process of counting out the proper combination of coins. By decreasing boarding time, total route travel time can be decreased (when necessary) to help alleviate the problem of late running buses.

The one-fare system will also make the transition to an "exact fare" policy much simpler. If transit patronage increases as current trends indicate, an exact fare policy may eventually become necessary in order to speed passenger boarding as much as possible.

By eliminating the need for two different types of punch-cards and monthly passes, the related bookkeeping time could be reduced considerably. This would allow more time to be devoted to other key areas, such as marketing.

The 25¢ fare will also enable an extremely accurate count of actual cash fare passengers by simply dividing total farebox revenue by 25. Such information can be very valuable in analyzing both individual routes, and the system as a whole.

TRANSFER POLICY

The current transfer policy can cause an unnecessary inconvenience to riders. In order to maximize user convenience, a new transfer policy should be adopted. There are two alternatives that will increase the "flexibility" of the system for users wishing to transfer. The first option is to permit transfers where any two routes intersect, with transfers being valid only until the arrival of the next bus on the intersecting route.

The second option is to permit transfers at any point on the route system, with a fifteen-minute or half-hour

time limit on each transfer. Although this option provides even greater flexibility for the user, there is also an increased potential for abuse of the transfer. There is a greater likelihood that some riders might start using such a liberal transfer policy not merely for convenience, but as a means of avoiding a second fare (such as a return trip fare). For this reason, it is recommended that the first transfer policy, transfers between any intersecting routes, be adopted.

MARKETING

Attarcting new riders is the end result of a well-designed, successful marketing program. The emphasis of the marketing program should key on three specific areas: public information, adversting, and consumer relations.

Public information should be widespread. Too often persons don't use transit simply because they don't know where the buses go, how often they run, or how much it costs. This information must be readily available to all citizens in a community. Route and fare information is very important and can be distributed in a number of ways: through newspapers, direct mailing or house-to-house deliveries, and small information centers at key business locations, shopping centers, housing projects, etc. Information in the form of posters and brochures should also be placed in

all major shopping, employment and recreational areas which are served by the transit system.

The cooperation of "newcomer" organizations is an excellent way to have transit information distributed to new residents. A new resident in the area should be given the free route map/timetable and, perhaps, a ticket good for one week of free riding. Bus drivers also should have timetables available at all times on the vehicles. In addition, timetables and other transit service information should be distributed from other locations, including the Chamber of Commerce office, the city halls, major retail stores, office buildings, and industrial plants.

Due to budgetary limitations, as much of this advertising as possible should be obtained through "trading out" advertising on MTA buses for advertising on radio and in the newspaper.

The advertising program should employ a multi-media approach, with radio as the principal element. Radio advertising offers flexibility, relatively low cost, and more importantly, reaches workers and others while they are driving or riding in cars. As such, radio serves to reach the most elusive, yet potentially the most productive transit market.

Advertising should be employed to:

- Inform the public of new schedules, equipment, fares, shelters, bus stop signs, routes, and special promotions.

- Convince people from every stratum of the communities to use the transit system.

The effectiveness of marketing and advertising depends not only on sound ideas but also on presentation. Message content must be carefully conceived to make transit appealing to commuting workers, students, retired citizens, and shoppers, and messages must be placed to reach appropriate audiences. Since this requires professional skill, it is recommended that the transit director obtain advertising assistance from a commerical advertsing firm.

Before spending limited marketing funds for such assistance, however, there was one suggestion in the original Transit Development Program (prepared by Henningston, Durham, and Richardson in 1975) which merits serious investigation: that the MTA contact the major industries in Clinton to request the part-time assistance of their advertising or public relations manager in aiding the MTA in developing a promotional and advertising compaign. The industries would be performing a "community service" and, in the long run, would be helping to conserve energy by increasing MTA patronage.

Another suggestion from the original Transit Development Program was that MTA contact local businesses who regularly run radio and newspaper advertisements, and request them to include a supplemental reference in their ads about riding an MTA bus.

For example, the closing of a radio ad for a department store could state "Joe's Department Store is served by the Main Avenue West and Camanche Avenue route of the Clinton bus system". Such advertisements could benefit both the MTA and the store itself by increasing the patronage of each.

Such low-cost and no-cost marketing/advertising ideas should be carefully examined by MTA, and implemented whenever possible.

Consumer relations must, to a large extent, be carried out by the bus drivers. The drivers represent the system to customers, and drivers' attitudes can be a useful promotional feature in itself. Drivers should be trained to be generally helpful and to handle complaints and suggestions promptly and courteously. An attitude of public service must be developed and maintained.

During the forthcoming year, several system changes will present opportunities for specific types of promotional advertising. If the proposed fare structure is implemented, it should be advertised, perhaps relating it to the increasing price of gasoline. New monthly pass and punch-card sales outlets should publicize this "new service" which they provide.

The new timetable/route map that is currently being developed by the MTA Director also provides an opportunity for special promotions. Perhaps they could be used for one free return trip from downtown (and be hole-punched to prevent their

re-use). These new system maps should show the entire Clinton area and the route interconnections. The route map should include major cross streets, time points, points of interest, the major tranfser locations, and other information needed to understand how to use the service (fares, transfer policy, and a transit information telephone number).

Perhaps the best opportunity MTA will have for a comprehensive promotional program will be the arrival of the four new buses in the spring of 1980. Once the approximate arrival date is known, all MTA advertisements should make some reference to the new buses. The first day that the new vehicles are operating should be the main promotional push. Perhaps free rides on the initial run of each vehicle, or even free rides all day, could be provided.

This opportunity to attract new riders must be taken advantage of, and the costs of such first-day promotions should be considered as a long-term investment to be recovered by increased ridership.

SERVICE CUTBACK

The MTA currently provides the same level of service on all routes six days a week, Monday through Saturday. There are some indications, however, that this level of service may not be warranted for the early morning hours on Saturdays. Saturday morning ridership is considerably lower than weekday ridership

on the early morning bus runs. This is primarily due to 1) fewer work trips on Saturdays, and 2) virtually no school trips on Saturdays.

Responses from the 1977 on-board survey indicated that 23.5% of MTA passenger-trips were work trips. Many of these work trips are made in the morning peak-hour time between 5:30 a.m. and 9:00 a.m. Since a large percentage of jobs are on a Monday through Friday work week, one would expect that the percentage of work trips would be significantly lower on Saturdays. Although this can not be proven without an expensive and time-consuming on-board survey, the fact remains that Saturday morning ridership is lower, and such a conclusion is logical.

The 1977 on-board passenger survey also indicated that 19.4% of the respondants were making school trips. Obviously, these too are drastically reduced on Saturdays.

The actual comparison of Saturday morning ridership and weekday morning ridership uses ridership figures (supplied through driver trip-sheets) for the month of October* in 1978. Since the comparison is only between AM peak-hour ridership figures, only figures from the 5:30 a.m. to 9:00 a.m. runs are used.

* October is considered an average month for transit planning purposes, with neither exceptionally good nor exceptionally bad weather. See Appendix 1 for the actual ridership figures used.

Table 4 compares average weekday ridership on each route with average Saturday ridership for each run from 5:30 a.m. to 9:00 a.m. This table clearly shows the significant difference between weekday and Saturday AM peak-hour ridership. Weekday ridership is much heavier on many early AM runs, and weekday ridership peaks earlier than does Saturday AM ridership. Weekday AM peak runs for the different legs of each route (ie. the peak run of the North Branch and the peak run of the South Branch) are indicated by this symbol [ ]. Saturday AM peak runs are identified by ovals (◯). As can be seen, Saturday morning ridership never peaks prior to 8:00 AM on any leg of any route.

In contrast, most weekday runs peak prior to 8:00, with the majority of them peaking at 7:00 AM. As mentioned earlier, this is probably due to increased work trips and school trips on weekdays. The 9:00 a.m. peak time for the South Clinton route is easily explained since there are no earlier South Clinton runs except at 6:00 a.m.

The 9th Avenue South Hill Line exhibits rather peculiar weekday AM peaking characteristics. The route peaks at 8:30 a.m. (although the preceding run has virtually identical average ridership). Although only a rider survey can accurately determine the trip purposes of these riders, it can be surmised that fewer of these trips are work or school trips.

TABLE 4

COMPARISON OF WEEKDAY AND SATURDAY
AVERAGE A.M. PEAK-HOUR RIDERSHIP

	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00
MAIN AVENUE WEST/ CAMANCHE AVENUE	MAW	CAM	MAW	CAM	MAW	CAM	MAW	CAM
Average Weekday Ridership	(13.9)	18.5	11.4	(18.6)	9.9	10.9	5.5	9.1
Average Saturday Ridership	4.5	5.5	4.0	5.7	4.0	[9.3]	[8.8]	5.5
MAIN AVENUE NORTH/ CAMANCHE AVENUE		MAN	CAM	MAN	CAM	MAN	CAM	MAN
Average Weekday Ridership		10.0	(7.2)	(27.0)	5.7	14.4	5.4	10.7
Average Saturday Ridership		1.8	1.8	1.3	2.5	7.3	[2.5]	[12.0]
9th AVENUE SOUTH HILL LINE								
Average Weekday Ridership		2.2	2.4	10.9	11.6	22.1	(22.2)	5.3
Average Saturday Ridership		2.3	1.5	1.3	3.3	[11.0]	10.8	6.8
NORTH BRANCH/ SOUTH BRANCH		NB	SB	NB	SB	NB	SB	NB
Average Weekday Ridership		6.6	4.5	(24.4)	(12.8)	15.4	7.4	4.5
Average Saturday Ridership		1.8	2.3	2.5	4.8	4.8	[5.5]	[8.3]
SOUTH CLINTON/ NORTH 4TH STREET		SC	N4	N4	N4	N4	N4	SC
Average Weekday Ridership		6.6	6.5	(15.0)	11.4	14.8	6.8	(8.5)
Average Saturday Ridership		3.5	1.8	1.0	2.8	2.3	[4.0]	[11.3]
ALL ROUTES								
Average Weekday Ridership	13.9	8.8	8.7	(19.2)	10.2	15.5	9.4	7.6
Average Saturday Ridership	4.5	3.0	2.3	2.4	3.5	6.9	6.3	[8.8]

( ) Weekday AM Peak-hour run

[ ] Saturday AM Peak-hour run

Saturday ridership, for the most part, starts to show significant increases with the 8:00 a.m. runs. The 8:00, 8:30, and 9:00 runs carry an average of 6.9, 6.3 and 8.8 passengers, respectively. Averages range from a high of 12.0 on the 9:00 Main Avenue North run, to a low of 2.3 on the 8:00 North 4th Street run. While most weekday routes show a slight decrease during these later AM peak hours, Saturday ridership usually increases during these same hours, probably due to increased shopping trips on Saturdays.

When ridership for all routes was averaged, the peak time on weekdays was 7:00 a.m., with an average of 19.2 passengers per bus. On Saturdays, the peak AM time was 9:00, with an average of 8.8 passengers per bus.

Financial Effect of Saturday Morning Service Cutback

The exceedingly low ridership on many pre-8:00 runs on Saturday mornings indicates the possible need to eliminate either some or all of this service. As already mentioned, no Saturday AM route peaks before 8:00, and ridership is usually quite low on runs prior to 8:00. Since 8:00 seems to be a natural break-point for Saturday AM ridership, ridership will be further analyzed by dividing it into two groups: those Saturday runs prior to 8:00 and those runs 8:00 through 9:00 . Using this method, an average ridership figure can be determined for each run, on any given route, for all runs prior to 8:00.

TABLE 5

AVERAGE RIDERSHIP PER RUN

	Before 8:00 a.m.	8:00 a.m. to 9:00 a.m.
Main Avenue West/ Camanche Avenue		
Weekday	14.5	8.5
Saturday	4.8	7.8
Main Avenue North/ Camanche Avenue		
Weekday	12.4	10.2
Saturday	1.8	7.3
9th Avenue South Hill Line		
Weekday	6.8	16.5
Saturday	2.1	9.5
North Branch/ South Branch		
Weekday	12.1	9.1
Saturday	2.8	6.2
North 4th Street		
Weekday	11.3	10.8
Saturday	1.8	3.1
South Clinton		
Weekday	6.6	8.5
Saturday	3.5	11.3
All runs		
Weekday	11.8	10.7
Saturday	2.8	7.3

Similarly, average ridership per run can be determined for each run, 8:00 through 9:00. These averages are compared to similar averages for weekday runs (see Table 5). Since the North 4th Street/South Clinton route has only two South Clinton runs (one at 6:00 a.m. and one at 9:00 a.m.) during the AM peak period, they were analyzed separately from the North 4th Street runs. Average ridership for each Saturday run prior to 8:00 a.m. is 2.8 riders, or nine riders less than the average during the same hours on a weekday (11.8 riders). That figure is per run, and there are twenty-one runs prior to 8:00 each day, or approximately 189 fewer passengers on all pre-8:00 Saturday runs combined. On those runs 8:00 through 9:00, the average difference between Saturdays and weekdays is only 3.4 riders per run.

The potential saving made possible by elimination of Saturday service prior to 8:00 is substantial, approximately $9200 per year. This figure is derived by computing the amount of expenses saved, minus the amount of revenue lost.

The approximate number of miles per route are shown below in Table 6 .

TABLE 6

MTA ROUTE MILEAGE

Route Name	Approximate # of miles per run	# of runs prior to 8:00	Total # of miles travelled before 8:00
Main Avenue West/ Camanche Avenue	14.75	2.5	36.87
Main Avenue North/ Camanche Avenue	14.0	2	28.0
9th Avenue South Hill Line	5.04	4	20.16
North Branch/ South Branch	12.25	2	24.50
South Clinton/ North 4th Street	4.25 6.75	1 3	4.25 20.25
TOTAL			134.03

These mileage totals are multiplied by the number of times that route is driven prior to 8:00 to determine the total number of miles driven. The combined mileage of all runs prior to 8:00 is 134.03 miles per day. This total is then multiplied by 52 (number of Saturdays per year) to yield a total of 6970 miles per year.

The MTA has an average cost per mile of $1.41. By multiplying the cost per mile by the number of miles, a decrease in expenses of $9827 results. This figure, however, does not include the accompanying revenue decrease.

The decrease in revenue can be estimated very easily. By determining the average number of Saturday riders before 8:00 (which is 59.5, obtained from driver trip sheets), multiplying it by 52 (Saturdays per year), the total annual decrease in ridership can be estimated. By multiplying this total of 3094 riders by the average fare of 20.3¢ per rider, a total revenue decrease of $628 annually results. The decrease in expenses of $9827 minus the decrease in revenue of $628 results in a net savings to MTA of $9199. This figure is an estimate, however, and could be affected by at least two factors.

First, even without buses operating before 8:00 on Saturdays, there will be some overhead expenses which will still be incurred by MTA (such as heating the building). The second factor concerns the average fare used to estimate revenue lost. This average is computed by dividing the total annual revenue by the total annual ridership. Thus it takes into consideration the numerous students and elderly persons whose current fares heavily influence the average fare, making it as low as it is. Hoever, during the hours of Saturday morning service under consideration, for elimination, a low percentage

of riders are members of these groups. The average fare, and the mount of revenue lost, will probably be somewhat higher than originally estimated, but will still result in a net savings for the MTA. Even using the full adult fare of 30¢ per rider, a net savings of almost $8900 would result from elimination of all Saturday morning service prior to 8:00.

Ridership Data

The following information should be compiled for proper evaluation of revenue and operating costs.

Daily records of revenue received on each regular transit route, charter service and other special services should be maintained. In addition, whenever a route is changed or shows a decrease in operating revenue, revenue should be computed by segments of the route to determine what adjustments should be made to improve revenue or reduce operations. Together, daily operating revenues and passenger load reports can provide a measure as to what segments of the population are using the service.

Passenger load counts should be made periodically. For example, a daily load count is desireable both 30 days before and after any major bus route change. Counts should be taken when revenue drops or increases. Such passenger counts are necessary to properly schedule buses, to determine whether an area is under or over served, and to as-

certain if larger equipment or headway changes are needed. Scheduled check points should be periodically checked on each route to see if the buses are maintaining their time schedule and to learn of any causes of delay to the bus.

Free Downtown Parking

The availability of ample free parking throughout Clinton's central business district adversely affects the Clinton Municipal Transit System. The provision of free parking acts as a discentive to using buses.

Transit ridership would undoubtedly increase if Clinton residents had to make the choice between paying for gasoline and parking or paying a nominal amount to ride the bus. By charging for downtown parking the City would increase its revenues either through parking fees or increased MTA farebox revenues.

CHAPTER VI - INDUSTRIAL COMMUTER SERVICE

Methodology

One of the major portions of this study involves analyzing the potential for peak hour commuter service to the following industries in the Clinton area: Chemplex Corporation, DuPont Company, Clinton Corn Processing Company, Ralston-Purina Company, and the International Paper Company. A preliminary meeting was held with the personnel managers of each company and the transportation planner to discuss the overall purpose of the study, the proposed survey form, and the degree of coordination and participation required.

After some discussion, it was decided that the most effective means of surveying the employees at each industry would be to distribute and collect the questionaires internally. This method allowed each industry to use whatever means deemed necessary to obtain a high rate of return. Survey froms were provided for every employee of each industry.

However, employers were requested to (if possible) distribute questionnaires only to those employees living within the potential service area of Clinton, Fulton and Camanche. The survey form used can be seen in Figure 4 .

Once all the completed surveys had been returned, the planning agency, each industry's responses were analyzed separately. The same method of analysis was used for each industry, and is

FIGURE 4

EMPLOYEE COMMUTING SURVEY

1. If transit commuting service is established to your place of employment would you

   a. Be willing to try it if the cost was LESS than $1.00 per day?

   .....yes .....no

   b. Be willing to transfer from an existing route at the central transfer point 5th Ave. So. and So. 2nd Street?

   .....yes .....no

2. At what time or shift do you start work.....A.M./P.M.
   finish work at.....A.M./ P.M.

3. Ho do you currently travel to work?

   a. drive alone b. carpool c. other (Please specify)

4. What is your home address. Please include zip code. (If rural route, give closest intersection or other general location information.)

basically as follows. First, all returned surveys from outside the potential service area (Clinton, Fulton, Camanche) were sorted out. Second, the surveys were separated into two groups based on their responses to the first part of the first question, those "willing to try" and those not "willing to try" bus service if it were established. Those that were not "willing to try" were only analyzed briefly to determine (if possible) why they responded negatively (ie. already in a carpool). It should be noted that these negative responses only indicate those that returned

their questionnaires. Undoubtedly, numerous other uninterested employees did not complete and return their surveys.

The positive responses, those "willing to try" were broken down and analyzed in much greater detail. In order to get the most accurate estimate possible for potential bus riders, responses were separated into shifts for further analysis. Those shifts that are currently completely unservable (ie. shifts that start or end outside MTA's current hours of operation, approximately 5:30 A.M. to 6:30 P.M.) were only briefly examined.

The responses of each shift (including swing shift responses) were then separated into "will transfer" and "won't transfer". This was to determine whether an "express" bus could load all passengers downtown at the central transfer point, or whether separate "commuter" bus routes need to be established. As mentioned above, each industry will initially be analyzed separately.

CHEMPLEX COMPANY

Of the approximate total of 600 employees at the Chemplex Company, 54 completed and returned surveys. A total of 49 respondants indicated they were willing to try transit commuting service and 5 indicated they were not willing to try it (see Table 7).

TABLE 7

TRANSIT COMMUTER SURVEY RESPONSES

Total Number of Respondents NOT Willing to try Transit Commuting Service

# of Respondents NOT willing to try	Approximately what time do you start/finish work?				How do you currently travel to work?			# of respondents living in each potential service area		
	7:30 3:30	8:00 4:00	7:45 4:15	Swing Shift	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
5	1	2	2		4	1		5		

Total number of Respondents WILLING to try Transit Commuting Service

# of Respondents willing to try	Approximately what time do you start/finish work?				How do you currently travel to work?			# of respondents living in each potential service area		
	7:30 3:30	8:00 4:00	7:45 4:15	Swing Shift	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
49	22	4	7	16	34	8		34	4	6

TABLE 8

RESPONSES (BY SHIFT) OF EMPLOYEES
WILLING TO TRY TRANSIT COMMUTING SERVICE

7:30-4:30 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
12		7	5		12		
	10	8	2		6		4

7:45-4:15 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
3		3			3		
	4	3	1		2		2

8:00-4:00 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
2		2			1		1
	2	2			1		1

SWING SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
10		10			7	3	
	6	6			2	1	3

Those respondants "willing to try" were further broken down by work shift (see Table 8). As can be seen, the greatest number of respondants on any shift was 22 on the 7:30 to 4:00 shift. This is a rather low total for potential rider-ship, especially when one must also take into account that seven of those are currently in car pools. It could be very difficult to convince these carpoolers to switch to transit service.

At the present time, it would not be economically feasible for the Clinton MTA to establish transit commuter service to Chemplex.

INTERNATIONAL PAPER COMPANY

Of the approximate 600 employees of International Paper, 140 completed and returned survey forms. A total of 64 respondants indicated they were willing to try transit commuting service, and 76 indicated they were not willing to try it (see Table 9).

TABLE 9

TRANSIT COMMUTER SURVEY RESPONSES

Total Number of Respondents NOT Willing to try Transit Commuting Service

# of respondents NOT willing to try	Approximately what time do you start/ finish work?							How do you currently travel to work?			# of respondents living in each potential service area		
	7:00 3:00	7:30 3:30	3:30 11:30	11:00 7:00	11:30 7:30	8:00 4:30	Swing Shift	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
76	3	11	5	8	9	3	37	61	12	3	76		

Total Number of Respondents WILLING to try transit commuting service

# of respondents willing to try	Approximately what time do you start/ finish work?							How do you currently travel to work?			# of respondents living in each potential service area		
	7:00 3:00	7:30 3:30	3:30 11:30	11:00 7:00	11:30 7:30	8:00 4:30	Swing Shift	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
64	5	8	1	4	11	4	31	58	5	1	62		2

TABLE 10

RESPONSES (BY SHIFT) OF EMPLOYEES
WILLING TO TRY TRANSIT COMMUTING SERVICE

7:00-3:00 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
3		3			3		
	2	1	1		2		

7:30-3:30 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
4		3	1		4		
	4	4			4		

3:30-11:30 SHIFT

# willing to transfer	# NOT willing to try transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
	1	1			1		

11:00-7:00 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
3		3			3		
	1	1			1		

TABLE 10 continued

11:30-7:30 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
8		6	1	1	7		1
	3	3			3		

8:00-4:30 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
1		1			1		
	3	3			2		1

SWING SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
12		12			12		
	19	17	2		19		

Respondants in both groups were well divided among the various shifts. The most frequent response to the shift question was swing shift, identified by almost fifty percent of the respondants in each group.

Of the 76 negative respodants, 59 worked either swing shift, or some completely unservable evening or night shift. Twelve of these employees were in carpools, quite probably the reason for their unwillingness to try transit service.

Of those respondants "willing to try" transit service, no more than eleven were on any one shift full-time, and that was an unservable 11:30-7:30 shift. Positive responses on servable shifts, 7:00-3:00, 7:30-3:30 and 8:00-4:30 , were too few to warrant establishing transit service. Even if periodically reinforced with swing shift workers, none of these groups would be large enough to make transit commuter service to the International Paper Company economically viable for the MTA. Positive responses, broken down by shift, can be examined in Table 10 .

RALSTON-PURINA COMPANY

Ralston-Purina employees completed and returned 141 surveys. There were 64 respondants unwilling, and 77 willing, to try transit commuting service if it were established (see Table 11).

TABLE 11

TRANSIT COMMUTER SURVEY RESPONSES

Total Number of Respondents NOT Willing to Try Transit Commuting Service

# of Respondents NOT Willing to Try	Approximately what time do you start /finish work?					How do you currently travel to work?			# of respondents living in each potential service area		
	3:00 11:00	7:30 4:00	7:00 3:00	11:00 7:00	Swing Shift	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
64	21	8	22	11	2	56	8		52	2	10

Total Number of Respondents Willing to Try Transit Commuting Service

# of Respondents Willing to Try	Approximately what time do you start/finish work?					How do you currently travel to work?			# of respondents living in each potential service area		
	3:00 11:00	7:30 4:00	7:00 3:00	11:00 7:00	Swing Shift	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
77	20	9	35	9	2	59	17	1	56	11	10

Of the 64 negative responses, only 8 indicated participation in a carpool, while 56 indicated that they drive alone to work.

Of the 77 respondants willing to try transit commuting service, only 48 work during servable shifts (during Clinton MTA operating hours). When these responses are separated by shift (see Table 12), the potential for transit service is further decreased. The shift with the greatest number of interested employees (35) was the 7:00-3:00 shift.

TABLE 12

RESPONSES (BY SHIFT) OF EMPLOYEES
WILLING TO TRY TRANSIT COMMUTING SERVICE

3:00-11:00 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
9		3	6		8	1	
	11	10	1		8	1	2

7:30-4:00 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
2		2			1	1	
	7	5	2		5		2

TABLE 12 continued

7:00-3:00 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
14		10	4		9	3	2
	21	18	2	1	16	2	3

11:00-7:00 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
2		2			1	1	
	9	7	2		7	2	

SWING SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
1		1			1		
	1	1					1

However, this group is further subdivided by those willing to transfer, and those unwilling to transfer, and by their physical distribution within the urban area. Those unwilling to transfer would necessitate establishing special commutes routes throughout the urban area. It would be impossible for a bus to maintain an

adequate travel-time and still serve all the employees from Fulton, Clinton and Camanche. Such a long, time-consuming route would probably result in employees returning to the use of their private automobiles.

The only other servable shift (7:30-4:00) had similar complications with its nine interested respondants.

At the present time, it would not be economically feasible for the Clinton MTA to establish transit service to the Ralston-Purina Company.

DUPONT COMPANY

There are approximately 1,230 employees at Du Pont, of whom 592 completed and returned surveys. Of those 592 respondants, 346 were willing to try transit commuting service if it were established and 246 were not willing to try it (see Table 13).

TABLE 13

TRANSIT COMMUTER SURVEY RESPONSES

Total Number of Respondents NOT Willing to Try Transit Commuting Service

# of Respondents NOT Willing to Try	Approximately what time do you start /finish work?					How do you currently travel to work?			# of respondents living in each potential service area		
	7:45 4:15	8:00 4:00	Swing Shift	12:00 8:00	4:00 12:00	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
246	80	3	161	1	1	150	95	1	190	10	46

Total Number of Respondents Willing to Try Transit Commuting Service

# of Respondents Willing to Try	Approximately what time do you start/finish Work?					How do you currently travel to work?			# of Respondents living in each potential service area		
	7:45 4:15	8:00 4:00	Swing Shift	12:00 8:00	4:00 12:00	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
346	124	13	209	0	0	210	135	1	284	17	45

Of the 246 negative respondants, 95 indicated that they were in carpools, and 150 indicated that they drove to work alone.

Of the 346 positive responses, 135 indicated they were in carpools, while 210 indicated that they drove to work alone. These positive responses are broken down by shift in Table 14 .

TABLE 14

RESPONSES (BY SHIFT) OF EMPLOYEES
WILLING TO TRY TRANSIT COMMUTING SERVICE

7:45-4:15 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
46		14	32		41	4	1
	78	34	44		58	5	15

8:00-4:00 SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
5		3	2		4		1
	8	6	2		7		1

SWING SHIFT

# willing to transfer	# NOT willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
85		59	26		77	4	4
	124	94	29	1	97	4	23

Of the 124 responses from the 7:45-4:15 shift, 46 indicated they would be willing to transfer from existing MTA routes to a transit commuter bus. However, it is important to note that 32 of these employees are currently in carpools, and transit service would have to be efficient as well as economical to convert them to regular transit riders.

There were 85 swing shift workers willing to transfer from existing routes. Of course, they would only be able to use transit service when they were on the daytime shift. The large number of carpoolers, 26, should also be noted.

These figures indicate potentially high ridership for an "express" transit bus running from the central transfer point downtown directly to Du Pont.

There also appears to be high potential for the establishment of separate transit commuter routes. Such routes would eliminate the need for downtown transfers and thereby increase potential ridership on the 7:45-4:15 shift to 99 (Camanche and Fulton residents are excluded from this total).

However, similar commuter routes could not be established for shift workers for obvious reasons. The frequently changing shifts of over 200 employees would necessitate frequently changing routes, and the end results would be very few riders.

Commuter transit service to Du Pont appears to be feasible and merits further investigation and consideration.

CLINTON CORN PROCESSING COMPANY

The Clinton Corn Processing Company has approximately 1,300 employees, 384 of whom completed and returned questionnaires. Of these respondants, 224 were willing to try transit commuting service if it were established; 160 were not (see Table 15).

TABLE 15

TRANSIT COMMUTER SURVEY RESPONSES

Total number of Respondents NOT Willing to Try Transit Commuting Service

# of Respondents NOT Willing to Try	Approximately what time do you start/finish work?				How do you currently travel to work?			# of Respondents living in each potential service area		
	7:00 3:00	3:00 11:00	7:45 4:00	Swing Shift	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
160	66	1	45	48	108	42	10	137	6	17

Total number of Respondents Willing to Try Transit Commuting Service

# of Respondents Willing to Try	Approximately what time do you start/finish work?				How do you currently travel to work?			# of Respondents living in each potential service area		
	7:00 3:00	3:00 11:00	7:45 4:00	Swing Shift	Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
224	73	1	95	55	170	49	5	175	23	26

Of those not willing to try transit service, 42 indicated they were in carpools, 108 indicated they drove alone, and ten indicated they walked or rode bicycles.

Of those respondants willing to try transit service, 49 indicated they were in carpools, 170 indicated that they drove alone, and five indicated they walked or rode bicycles. These responses are further broken by shift in Table 16.

Of the 73 employees working from 7:00 to 3:00, 32 indicated they would be willing to transfer from existing MTA routes to a transit commuter bus. This would be enough riders, if they all rode, to make a commuter run economically viable for the MTA. This figure could be increased periodically by any of the 30 swing shift workers who indicated they would be willing to transfer.

Of the 95 respondants working from 7:45 to 4:00, 41 indicated they were willing to transfer. However, 14 of these employees are currently in carpools and could be difficult to switch to full-time transit riders.

Both the 7:00-3:00 shift and the 7:45-4:00 shift have enough positive response (53 and 73, respectively, excluding Fulton and Camanche residents) to consider establishing separate transit commuter routes in the city. Much would depend, however, on the actual physical distribution of employees throughout the city. Further investigation is necessary before any serious consideration of implemention.

TABLE 16

RESPONSES (BY SHIFT) OF EMPLOYEES
WILLING TO TRY TRANSIT COMMUTING SERVICE

7:00-3:00 SHIFT

# willing to transfer	# Not willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
32		27	5		28	3	1
	41	32	8	1	25	4	12

3:00-11:00 SHIFT

# willing to transfer	# Not willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
1		1			1		

7:45-4:00 SHIFT

# willing to transfer	# Not willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
41		24	14	3	34	7	
	54	38	15	1	39	5	10

SWING SHIFT

# willing to transfer	# Not willing to transfer	How do you currently travel to work?			# of respondents living in each potential service area		
		Drive Alone	Carpool	Other	Clinton	Fulton	Camanche
30		26	4		29	1	
	25	22	3		19	3	3

SUMMARY OF INDUSTRIAL COMMUTER SURVEY

Both the Du Pont Company and the Clinton Corn Processing Company show potential for the successful establishment of transit commuter service. An "express" commuter service from the downtown central transfer point appears suitable to both industries. Such "express" runs would be easier to implement than separate commuter routes, and would probably be more economical for the MTA to operate.

Separate commuter routes, however, have the potential to serve more employees. Such front-door service may be necessary to pull people out of their private automobiles and onto transit buses. However, the establishment and success of these routes necessitates good planning and should not be done haphazardly. The surveys were merely the first step in successfully establishing industrial commuter transit service. Much additional work must be done before sucessful implementation can be achieved.

FIGURE 5a.

RESPONSES OF FULTON TRANSIT SURVEY

1. If MTA bus service was available within three (3) blocks of your home would you or members of your family use it?

15 yes 1 no

2. a) Please estimate the number of times per week you or your family would ride the bus and the destinations for each of these trips by trip purpose.

# of Trips	Trip Purpose	# of Trips	Trip Purpose
48	Work	19	Social/ recreation
	Work		
5	School	10	Personal business
11	Shopping	9	Other

b) Please indicate the time of day you or your family would use bus service.

6:15 - 6:45	11	3:15 - 3:45	4
6:45 - 7:15	1	3:45 - 4:15	8
7:15 - 7:45	20	4:15 - 4:45	12
7:45 - 8:15		4:45 - 5:15	2
8:15 - 8:45		5:15 - 5:45	1
8:45 - 9:15	14	5:45 - 6:15	6

c) Please indicate the days of the week that you or your family would use bus service.

nday 11 Tuesday 11 Wednesday 13 Thursday 10 Friday 11 Saturday 3

Camanche

Ten surveys were returned out of a total of 190 which were mailed to Camanche residents, only 5.2% of the total. As with Fulton, this low return rate indicates little interest (among those surveyd) in obtaining transit service. The responses of those persons who returned the survey are summarized in Figure 5 . The major trip purpose identified was again the work trip, with respondants indicating a desire for 13 work trips per week. The greatest number of trips per week in any time slot was 14 from 3:15-3:45, an average of less

than 3 trips daily. The maximum number of trips identified for any day was 7 trips on Wednesday, too few to make even one bus run economically feasible.

FIGURE 5b.

RESPONSES OF CAMANCHE TRANSIT SURVEY

1. If MTA bus service was available within three (3) blocks of your home would you or members of your family use it?

10 yes 0 no

2. a) Please estimate the number of times per week you or your family would ride the bus and the destinations for each of these trips by trip purpose.

# of Trips	Trip Purpose	# of Trips	Trip Purpose
13	Work	1	Social/ recreation
	Work		
	School	4	Personal business
9	Shopping		Other

b) Please indicate the time of day you or your family would use bus service.

6:15 - 6:45	10	3:15 - 3:45	14
6:45 - 7:15	2	3:45 - 4:15	3
7:15 - 7:45		4:15 - 4:45	1
7:45 - 8:15		4:45 - 5:15	2
8:15 - 8:45	1	5:15 - 5:45	
8:45 - 9:15	5	5:45 - 6:15	1

c) Please indicate the days of the week that you or your family would use bus service.

Monday 3 Tuesday 4 Wednesday 7 Thursday 5 Friday 4 Saturday 2

At the present time, expansion of transit service to Camanche is unwarranted and would be a considerable financial burden for the MTA.

APPENDIX

CHAPTER VII - PEAK-HOUR COMMUTOR SERVICE TO FULTON AND CAMANCHE

A.M. PEAK HOUR RIDERSHIP COUNT BY RUN AND DAY OF WEEK

October 1978

Main Avenue West and Camanche Avenue

Mon.	5	11	14	7	17	8	6	2
Tues.	4	10	13	10	13	6	11	4
Wed.	11	15	9	18	6	17	5	18
Thurs.	4	11	18	7	21	7	9	2
Fri.	6	9	13	7	20	8	12	9
Sat.	3	5	5	6	3	4	13	2
Mon.	11	15	9	25	7	8	3	9
Tues.	15	17	7	33	5	12	2	11
Wed.	18	20	9	19	7	8	5	10
Thurs.	9	11	12	23	6	4	1	11
Fri.	15	18	10	19	6	10	6	4
Sat.	5	4	2	6	4	7	4	9
Mon.	17	23	7	13	11	13	3	10
Tues.	24	23	7	19	16	19	10	11
Wed.	21	23	9	13	11	15	7	11
Thurs.	21	25	15	15	7	12	5	15
Fri.	14	12	10	14	9	14	8	3
Sat.	8	5	3	6	4	13	3	9
Mon.	15	23	9	16	10	6	7	13
Tues.	18	23	12	22	5	14	4	10
Wed.	15	21	11	28	10	13	2	8
Thurs.	18	27	15	28	6	10	7	6
Fri.	16	24	16	29	9	14	4	13
Sat.	2	8	6	5	5	13	15	2
Mon.	10	20	13	28	8	10	1	15
Tues.	19	26	12	17	8	11	2	6
Total monthly ridership	324	429	266	433	234	276	155	223
	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00

APPENDIX 1

A.M. PEAK HOUR RIDERSHIP COUNT BY RUN AND DAY OF WEEK

October 1978

9th Avenue South Hill Ine

Mon.		2	1	8	14	24	20	6
Tues.		3	1	8	11	31	22	5
Wed.		3	1	9	10	18	23	6
Thurs.		2	1	14	16	19	27	5
Fri.		2	9	13	28	18	24	12
Sat.		2	1	2	1	15	10	5
Mon.		1	3	5	9	15	23	5
Tues.		1	3	12	13	25	21	4
Wed.		1	2	9	15	27	27	4
Thurs.		2	3	15	11	21	25	7
Fri.		2	2	10	11	21	24	6
Sat.		3	2	2	12	6	6	10
Mon.		2	4	9	6	23	21	7
Tues.		2	2	12	16	25	29	3
Wed.		1	3	10	2	25	5	7
Thurs.		3	1	13	8	20	26	8
Fri.		2	0	12	7	13	22	5
Sat.		3	1	0	0	13	14	2
Mon.		2	2	10	11	26	20	3
Tues.		2	2	10	10	24	23	2
Wed.		2	1	10	8	23	21	4
Thurs.		2	3	15	9	27	22	9
Fri.		6	3	7	14	23	24	3
Sat.		1	2	1	0	10	13	10
Mon.		1	3	15	11	21	18	2
Tues.		5	3	14	15	18	21	4
Total monthly ridership		58	59	245	268	531	531	144
	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00

APPENDIX 1

A.M. PEAK HOUR RIDERSHIP COUNT BY RUN AND DAY OF WEEK

October 1978

North Branch/South Branch

Mon.		7	4	16	8	19	3	3
Tues.		8	5	24	8	12	5	4
Wed.		4	5	23	14	18	3	4
Thurs.		8	4	24	8	15	11	5
Fri.		7	5	22	15	15	8	2
Sat.		1	3	3	5	5	6	26
Mon.		7	3	24	13	14	5	0
Tues.		7	5	23	10	12	7	4
Wed.		5	5	27	17	14	6	4
Thurs.		7	6	18	11	15	5	9
Fri.		6	2	26	17	12	9	3
Sat.		2	2	2	5	7	6	3
Mon.		6	5	24	20	17	6	1
Tues.		6	3	31	16	2	2	4
Wed.		4	4	5	15	30	4	6
Thurs.		5	4	25	12	8	20	9
Fri.		6	5	28	11	12	13	14
Sat.		3	2	4	6	4	-	1
Mon.		3	4	28	20	21	11	1
Tues.		6	4	30	13	21	11	6
Wed.		9	5	25	12	21	7	2
Thurs.		10	5	30	11	20	6	5
Fri.		8	5	33	15	11	9	7
Sat.		1	2	1	3	3	9	3
Mon.		9	5	24	8	21	1	2
Tues.		7	5	27	7	9	12	5
Total monthly ridership		152	107	547	300	358	185	133
	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00

APPENDIX 1

A.M. PEAK HOUR RIDERSHIP COUNT BY RUN AND DAY OF WEEK

October 1978

Main Avenue North and Camanche Avenue

Mon.		8	4	21	6	17	3	8
Tues.		9	4	19	4	20	5	11
Wed.		9	5	19	6	15	9	2
Thurs.		8	10	35	10	9	7	8
Fri.		8	10	24	6	13	14	15
Sat.		2	3	2	4	9	0	16
Mon.		11	7	35	7	8	7	8
Tues.		13	3	29	7	13	4	8
Wed.		8	4	28	2	11	10	13
Thurs.		9	5	27	6	14	4	5
Fri.		10	4	29	5	13	3	27
Sat.		2	1	1	1	8	2	13
Mon.		10	8	43	6	16	7	4
Tues.		12	8	24	2	19	7	11
Wed.		13	4	14	4	12	3	14
Thurs.		8	7	32	9	11	7	10
Fri.		13	7	33	2	21	6	11
Sat.		1	2	2	4	6	5	10
Mon.		11	14	28	4	15	7	12
Tues.		12	11	28	4	17	10	9
Wed.		9	9	22	8	17	3	5
Thurs.		11	10	27	2	14	2	17
Fri.		10	7	23	7	15	1	13
Sat.		2	1	-	1	6	3	9
Mon.		10	8	26	6	12	6	8
Tues.		8	10	28	2	15	4	16
Total monthly ridership		227	166	599	125	346	129	283
	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00

APPENDIX 1

A.M. PEAK HOUR RIDERSHIP COUNT BY RUN AND DAY OF WEEK

October 1978

South Clinton/North 4th Street

Mon.		5	9	15	11	8	9	9
Tues.		8	6	12	10	15	6	6
Wed.		5	9	16	9	19	7	9
Thurs.		6	10	10	12	15	10	7
Fri.		7	11	12	11	9	7	10
Sat.		**2**	**2**	**0**	**1**	**2**	**4**	**9**
Mon.		5	7	23	9	18	4	6
Tues.		8	5	18	12	15	7	9
Wed.		9	7	24	7	21	5	13
Thurs.		7	6	11	12	17	4	7
Fri.		8	6	17	12	14	8	14
Sat.		**5**	**0**	**1**	**3**	**3**	**5**	**12**
Mon.		12	4	14	14	18	6	9
Tues.		8	7	18	18	14	5	7
Wed.		8	2	3	8	7	5	9
Thurs.		5	5	13	9	8	6	7
Fri.		5	6	17	3	15	5	5
Sat.		**4**	**2**	**2**	**3**	**4**	**2**	**11**
Mon.		6	3	14	9	18	8	5
Tues.		6	4	13	16	14	4	5
Wed.		8	5	13	12	24	5	6
Thurs.		4	9	12	21	18	5	10
Fri.		5	6	16	15	9	9	15
Sat.		**3**	**3**	**1**	**4**	**0**	**5**	**13**
Mon.		6	6	21	11	12	11	7
Tues.		5	10	17	10	17	13	11
Total monthly ridership		160	158	333	262	334	165	231
	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00

CLINTON MTA BOARD OF TRUSTEES

1936 N. Second Clinton, Iowa 52732 PH. 319-242-3721

Leo W. Stuedemann James R. Fuidge Richard J. Timmer

CLINTON MTA EXPERIMENTAL SERVICE QUESTIONAIRE

This survey will be utilized by MTA personnel to determine if bus service can be provided to your area.

1. If MTA bus service was available within three (3) blocks of your home would you or members of your family use it?

   yes no

2. a) Please estimate the number of times per week you or your family would ride the bus and the destinations for each of these trips by trip purpose.

# of Trips	Trip Purpose	Trip Destination	# of Trips	Trip Purpose	Trip Destination
____	Work	_____	_____	Social/ recreation	_____
_____	Work	_____	_____	Personal business	_____
_____	School	_____	_____	Other	_____
_____	Shopping	_____			

b) Please indicate the time of day you or your family would use bus service.

6:15 - 6:45	_____	3:15 - 3:45	_____
6:45 - 7:15	_____	3:45 - 4:15	_____
7:15 - 7:45	_____	4:15 - 4:45	_____
7:45 - 8:15	_____	4:45 - 5:15	_____
8:15 - 8:45	_____	5:15 - 5:45	_____
8:45 - 9:15	_____	5:45 - 6:15	_____

c) Please indicate the days of the week that you or your family would use bus service.

Monday ___ Tuesday ___ Wednesday ___ Thursday ___ Friday ___ Saturday ___

Thank you for completing this survey!

PLEASE RETURN TO: Clinton Municipal Transit Authority
1936 N. Second
Clinton, IA 52732